CLAIMS

1. A machine for machining or processing a conveyable material, in particular a pourable or pasty mass or a loose material, wherein the machine has at least one outlet section (2; 21; 47, 48) with at least one outlet (2a; 21a; 47, 48), through which the conveyable material (M) to be machined or processed can be transported along a conveying direction (F), characterized in that the at least one outlet section (2; 21; 47, 48) forms at least one partial area of a channel (1) of the machine, and is moveably mounted relative to the channel (1) of the machine, wherein the at least one outlet section (2; 21; 47, 48) is coupled with at least one source (6, 7, 8, 9) for oscillations, by means of which it can be made to mechanically oscillate relative to the channel (1) of the machine.

2. The machine according to claim 1, characterized in that resilient means (4) are used to mount the at least one outlet section (2; 21; 47, 48) relative to the channel of the machine.

3. The machine according to one of the preceding claims, characterized in that dampening means are arranged between the at least one outlet section (2; 21; 47, 48) and the channel (1) of the machine, wherein in particular the conveyable material acts as the dampening means.

4. The machine according to one of the preceding claims, characterized in that the at least one outlet section (2; 21; 47, 48) and the channel (1) of the machine are decoupled in terms of oscillation.

5. The machine according to one of the preceding claims, characterized in that at least one source (6, 7, 8, 9) can impart to the at least one outlet section (2; 21; 47, 48) oscillations of a kind that exhibit a tangential and/or normal component (T, N) relative to the inner surface (5) of the at least one outlet (2a; 21a; 47, 48) facing the conveyable material (M).

6. The machine according to one of the preceding claims, characterized in that several outlet sections (2; 21; 47, 48) are sequentially arranged in at least one partial area of the channel (1) of the machine along the conveying direction (F) of the channel.

7. The machine according to claim 6, characterized in that at least some of the several sequential outlet sections (2; 47, 48) can be spaced apart along the conveying direction (F).

8. The machine according to claim 6 or 7, characterized in that the several outlet sections are identical to each other.

9. The machine according to claim 6 or 7, characterized in that at least some of the several outlet sections (47, 48) are different from each other.

10. The machine according to one of claims 6 to 9, characterized in that the several outlet sections can be made to oscillate identically to each other.

11. The machine according to one of claims 6 to 9, characterized in that at least some of the several outlet sections (2; 47, 48) can be made to oscillate differently from each other.

12. The machine according to one of the preceding claims, characterized in that the at least one source (6, 7, 8, 9) for mechanical oscillations is a vibrator, and the mechanical oscillations are dampened, forced oscillations of the at least one outlet section (2; 21; 47, 48).

13. The machine according to one of the preceding claims, characterized in that the at least one source (6, 7, 8, 9) for mechanical oscillations is a striker that generates dampened collision excitations of the at least one outlet section (2; 21; 47, 48).

14. The machine according to claim 12 or 13, characterized in that it has several sources (6, 7, 8, 9) for mechanical oscillations.

15. The machine according to one of claims 12 to 14, characterized in that the at least one source (6, 7, 8, 9) for mechanical oscillations can be actuated independently of the operating status of the machine.

16. The machine according to claim 14 or 15, characterized in that the several sources (6, 7, 8, 9) for mechanical oscillations can be actuated separately from each other.

17. The machine according to one of the preceding claims, characterized in that at least one first device (10) for acquiring the rheological

properties of the conveyable material is arranged downstream from the respective outlet section (2; 21; 47, 48) in order to generate first signals at a first signal output (11) that characterize the physicochemical, in particular rheological properties of the material (M) downstream from the outlet section (2; 21; 47, 48).

18. The machine according to one of the preceding claims, characterized in that at least one second device (12) for acquiring the rheological properties of the conveyable material (M) is arranged upstream from the respective outlet section (2; 21; 47, 48) in order to generate second signals at a second signal output (13) that characterize the physicochemical, in particular rheological properties of the material (M) upstream from the outlet section (2; 21; 47, 48).

19. The machine according to one of claims 17 or 18, characterized in that the signals of the first and/or second signal output (11, 13) are compared with those reference signals that characterize specific rheological properties, wherein feedback takes place within a control circuit as a function of the result from comparing the signals to activate the at least one source (6, 7, 8, 9) for mechanical oscillations.

20. The machine according to one of claims 17, 18 or 19, characterized in that the signals of the first and second signal output (11, 13) are compared with each other, wherein feedback takes place within a control circuit as a function of the result from comparing the signals to activate the at least one source (6, 7, 8, 9) for mechanical oscillations.

21. The machine according to one of the preceding claims, characterized in that the channel (1) of the machine and the at least one outlet (2a; 21a; 47, 48) of the outlet section (2; 21; 47, 48) run vertically.

22. The machine according to one of claims 1 to 20, characterized in that the channel (1) of the machine and the at least one outlet (2a; 21a; 47, 48) of the outlet section (2; 21; 47, 48) run horizontally.

23. The machine according to one of the preceding claims, characterized in that the machine is an extruder (20), and the at least one outlet section (2) is a die, in particular an extrusion die, of the extruder.

24. The machine according to one of the preceding claims, characterized in that the machine is an extruder (20), and the at least one outlet section (2) is a melt filter (21) of the extruder.

25. The machine according to one of claims 1 to 22, characterized in that the machine is diecasting machine (20), and the at least one outlet section (2) is a conditioning cell of the diecasting machine.

26. The machine according to one of claims 1 to 22, characterized in that the at least one outlet section (47, 48) in the channel (1) of the machine is a volumetric section of the channel (1) filled with vibratable collision elements (41, 42).

27. The machine according to claim 26, characterized in that the collision elements (41, 42) form as dense a package (47, 48) as possible, with hollow spaces between contacting collision elements.

28. The machine according to claim 26 or 27, characterized in that the collision elements (41, 42) can vary in size and/or shape.

29. The machine according to one of claims 26 to 28, characterized in that the collision elements (41, 42) have at least one of the following shapes: spherical, polyhedral, bar-shaped, in particular cylindrical or prismatic.

30. The machine according to one of claims 26 to 29, characterized in that at least one part of the collision elements (41, 42) consists of an electrically conductive material, and the source (6, 7, 8, 9) for oscillations is a source for electromagnetic oscillations, wherein the electrically conductive collision elements can be excited by the generated electromagnetic alternating fields to mechanical oscillations and/or movements.